DOCUMENT RESUME

ED 337 296 PS 019 915

AUTHOR French, Lucia; Pak, Meesook Kim
TITLE Mothers and Peers as Conversational Partners: Quantity and Quality of Talk.
PUB DATE 25 Jun 91
NOTE 21p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (Seattle, WA, April 18-20, 1991).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Caregiver Speech; Child Language; *Language Acquisition; *Mothers; *Parent Child Relationship; *Peer Relationship; *Preschool Children; Syntax; *Toddlers
IDENTIFIERS *Conversation; Imperatives (Grammar); Length of Utterance; Questions; Turn Taking; Word Counts

ABSTRACT

This study investigated the nature and extent of differences in young children's talk when they interact with mothers and peers. Sixteen girls between 2.5 and 3.5 years of age played twice with their mothers and twice with a peer. Play sessions were videotaped and coded according to measures of quantity and quality of talk. Results of measures of quantity indicated that children used a greater number of word tokens and a greater variety of word types when talking with the mother than when talking with the peer. The ratio between tokens and types was the same with each partner. The number of utterances and the number of turns taken in the conversation were greater with the mother than with the peer, while the number of utterances per turn favored the peer over the mother. Results of measures of quality indicated that children's mean length of utterance was higher with peers than with mothers. The use of subordinating conjunctions was identical with each partner. Children's use of imperatives was more frequent with peers, and their use of questions more frequent with mothers. Children were equally likely to use turnabouts, or conversational linkages that are both contingent and projective, with mothers and peers. Nine references are cited. (BC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED337296

Mothers and Peers as Conversational Partners: Quantity and Quality of Talk

Lucia French and Meesook Kim Pak
Graduate School of Education and Human Development
University of Rochester
Rochester, New York 14627

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Lucia French
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

PS 019915

In French, L. (Chair) Language Development in Context. Symposium presented at the Biennial Meeting of the Society for Research in Child Development, Seattle. April, 1991

BEST COPY AVAILABLE

Mothers and Peers as Conversational Partners:

Quantity and Quality of Talk

A great deal of research indicates that parents play an important role in children's early language acquisition (e.g., Bruner, 1983; Nelson, 1973; Snow, 1979). However, children must eventually move beyond these highly skilled and supportive conversational partners, and talk with other children. Any adult who has tried talking with two- and three-year-olds knows that they are often very difficult conversational partners. They may offer new information as if it were already shared, fail to respond to direct questions, change the topic with no warning, and then walk off leaving their partners in a "conversational lurch." Yet despite their marked limitations as conversational partners, young children have sustained, meaningful interactions with one another which are often accompanied and guided by language. How do they accomplish this?

Very little prior research has considered the same children talking to adults and to other children, and we therefore have little idea of whether, and if so how, children deal differently with these two very different sorts of conversational partners. It is generally acknowledged that child-child talk is delayed relative to child-adult talk, and Bates (1975) has suggested that children who interact primarily with other children, for example children who grow up in institutions, may have delayed language acquisition. The research reported here investigates the nature and extent of differences in young children's talk when they are interacting with their conversationally skilled mothers and with their conversationally inexperienced peers. We would expect that any differences found could be multiply determined both by the different conversational contexts provided by adult and peer partners, and by the children's decisions about how best to communicate with each type of partner.

Subjects, Materials, and Procedures: The target subjects were 16 first-born girls between 2.5 and 3.5. They played twice with their mothers and twice with a peer (a female

acquaintance of approximately the same age). On one occasion with each partner, they played in a child-sized model kitchen complete with appliances and utensils. On the other occasion, they played with an assortment of age appropriate toys that included a shape box, small and large blocks, a doll, a wagon, and a stuffed animal. Each session lasted fifteen minutes; order of partners and of materials was balanced. The videotaped sessions took place in the homes of the target children. The two peers participated in a presession with a different set of assorted toys in order to accustom them to the general procedure. All videotapes were transcribed to indicate language and activities; these transcripts were checked and corrected at least once before being entered into the CHILDES system (MacWhinney & Snow, 1985).

Results and Discussion: Here we combine findings across settings, and focus on differences in the target children's talk as a function of partner. Various measures of quantity and quality of talk have been considered. Results will be discussed briefly as they are presented, then summarized when all have been presented.

Quantity of Talk. Quantity of talk can be considered in a variety of ways, including the number of words, utterances, and turns. Table 1 shows the effects of partner on the use of words. The target children used a greater number of words (word tokens) and a greater variety of different words (word types) when talking with the mother, and the type/token ratio was essentially the same with each partner.

Insert Table 1 about here

Turns were defined as extending from the time that one partner began speaking until the time that the other partner began speaking. As shown in Table 2, both the total number of utterances and the total number of turns were significantly higher with the mother than with the peer [$F(1, 15) = 28.25$, $p < .0001$; $F(1, 15) = 47.61$, $p < .0001$,

respectively). On the other hand, the number of utterances per turn was significantly higher with the peer than with the mother F, (1, 15) = 9.46, $p < .01$.

Insert Table 2 about here

In terms of quantity of talk then, the children talked more when interacting with their mothers than when interacting with their peers. This finding held at the levels of word tokens, word types, number of utterances, and number of turns. It seems safe to conclude that two-year-old children get more practice talking while engaging in mother-child interaction than while engaging in child-child interaction.

The less straightforward measures of Type/Token ratio and Utterances per Turn did not follow this pattern. The Type/Token ratio was equivalent across partners, and Utterances per Turn favored the peer over the mother. The latter measure is ambiguous in that it may, in different situations, reflect either greater or lesser conversational sophistication. In these data we believe that a higher number of utterances per turn indicates less competent conversation. Questions facilitate smooth turntaking by indicating clearly that a response is expected and by setting up the direction of that response. When fewer questions are asked, turntaking is less smooth and hence there may be more utterances within a turn. Peers asked far fewer questions than did the mothers (18% compared to 36% of all utterances respectively).

Quality of Talk. There are numerous ways of assessing quality of talk. Here we consider syntactic sophistication (as indexed by MLU and use of subordinating conjunctions), frequency and type of questions, frequency of imperatives, linkages across turns, and responsiveness to questions.

MLU was the first measure that we considered as an indicator of syntactic complexity. As can be seen in Table 3, the target children's overall MLU was significantly higher (F (1, 15) =11.84, $p < .01$) with peers than with mothers. In attempting to

account for this pattern, we considered that the mothers were much more likely than the peers to ask questions. Fully 36% of the mothers' utterances were questions, whereas only 18% of the peers' utterances were questions. Because many questions can be answered in a single word, we suspected that the differential frequency of questions might account for the partner effects in the target children's MLU. MLU was then recalculated on the basis of only utterances that did not immediately follow a question from the partner, and as shown in Table 3, this eliminated partner effects in the target children's MLU.

Insert Table 3 about here

As another indicator of syntactic complexity, we considered the occurrence of words that introduce subordinate clauses, for example, *before*, *after*, *which*, and so forth.[1] The relative frequency of these words was virtually identical with each partner, occurring in .08 of utterances.

Both measures of syntactic complexity we used seem essentially unaffected by partner, with the exception of responses to mothers' questions. This pattern suggests that children's syntactic skills transfer readily across partners regardless of the partner's conversational skill.

The target children's use of imperatives and questions were calculated as a proportion of all utterances. Imperatives were used more frequently with the peer (mean proportion .13) than with the mother (mean proportion .06), $F(1, 15) = 21.30$, $p < .001$. While this difference in the frequency of imperatives surely reflects status differences between the partners to some extent, it may also serve as a means of communicating with a relatively unresponsive partner. That is, the use of imperatives is a highly explicit means of establishing shared knowledge and of providing direction for the partner's next turn or action.

The overall frequency of questions was virtually identical across partners (mean proportions .12 with the peer, .13 with the mother). The distribution of question types as a function of total questions is shown in Table 4. The children were significantly more likely to ask WH-questions of mothers than of peers, $F(1, 15) = 10.94$, $p < .01$. This may reflect the children's appreciation that, relative to peers, mothers are a good source of information. Although the primary focus here is the target children's language, it is worth noting that there were significant differences between the mothers and peers in terms of the proportion of the target's questions to which they responded. Mothers responded to 72% of the targets' questions, whereas peers responded to only 41% of the targets' questions. Thus, while the targets asked questions of the two partners with equal frequency, they were much more likely to receive a reply from the mothers.

Insert Table 4 about here

Linkage across turns was considered in terms of both contingency and the use of projectives, that is, questions or imperatives that establish a framework or direction for the partners' next turn. A turn that is both contingent and projective is defined as a turnabout, a conversational device that has received much attention in the literature with regard to the ways mothers support their young children's conversations, but little attention with regard to use by children themselves (Garvey, 1977; Kaye & Charney, 1980; Martinez, 1987). Table 5 shows the mean proportions of turns falling into four categories: Turnabouts, contingent but not projective, projective but not contingent, and unlinked by the speaker, that is, neither contingent nor projective.

Insert Table 5 about here

Children were far more likely to be contingent when interacting with their mothers (81% of turns) than when interacting with their peers (64% of turns), but this greater level of contingency did not translate into a greater use of turnabouts. Children were equally likely to use turnabouts with both the mother and peer partners. With mothers there was a significantly greater likelihood of turns that were contingent but not projective, $F(1, 15) = 10.66$, $p < .01$. With peers there was a significantly greater likelihood of turns that were projective but not contingent, and turns that were simply unlinked [$F(1,15) = 32.57$, $p < .0001$; $F(1, 15) = 25.36$, $p < .0001$, respectively].

The greater level of contingency with the mothers probably reveals more about the mothers than about the children. The mothers more frequently used questions, which in turn set up the direction of the children's next response. In addition, it is generally known that many mothers are likely to focus their talk so that it meshes with the children's attentional focus (e.g., Tomasello & Farrar, 1986). Both of these factors undoubtedly facilitate the children's likelihood of maintaining contingency.

It has already been noted that mothers were much more likely than peers to ask questions of the target children. How do children respond to questions? Of course not all questions are intended to be answered - some may be rhetorical, and some may be followed immediately by another utterance by the same speaker such that there is no opportunity to answer. We identified all questions to which the target children had an opportunity to respond, and made a determination as to whether these were appropriate to the topic of conversation or were non-contingent in context. We then evaluated the responses to the appropriate questions along a four point scale: (1) contingent but non-substantive replies such as repeating or otherwise acknowledging the question without actually answering it, (2) answers that provided less than the amount of information requested, (3) answers that provided the amount of information requested, and (4) answers that provided more than the amount of information requested. Answers that provided the amount of information requested were further divided into single-word/minimal information answers such as

"Yes," "No," and "Here" and multiword/"formulated" answers such as "Let's set the table now." The proportion of contingent responses falling into each of these categories is shown in Table 6.

Insert Table 6 about here

When the target children responded to questions, there were no partner effects for three of the four types of responses: non-substantive, less-than requested information, and greater than requested information. Children were significantly more likely however to provide their mothers with information equal to that requested, $F(1, 15) = 15.34$, $p < .01$. When these "equal to" responses were divided into minimal and formulated replies, it became apparent that the partner effect resulted from giving more single-word responses to the mother, $F(1, 15) = 14.44$, $p < .01$; there were no partner effects for the frequency of multi-word replies. Again, it appears that the differences in the target children's talk across partners results from differences in the partners - mothers' questions were more likely to be phrased so that they could be answered in a single word.

Summary and Conclusions:

Our within-subject database allows us to consider ways that the same children talk differently to their peers and to their mothers during play sessions. Our goals were to explore the similarities and differences in talk as a function of partner, to account for these differences in terms of characteristics of either the partners or the target children, and to use these observations as the basis for speculations regarding the benefits of child-child and child-mother talk.

Our first observation has to do with sheer amount of talk. In a given amount of time, the children talked more with their mothers than with their peers. This was true at the levels of words (tokens and types), utterances, and turns. It is probable that this difference in amount of talk resides in differences in the partners' conversational skills.

Given their greater conversational competence, mothers are better able to maintain contingency, to respond to their children's utterances, to prompt utterances by asking questions, and to persist in attempts to maintain the interaction even when the child fails to respond appropriately. Irrespective of issues of quality of talk, children may simply have more opportunity to practice talking when interacting with their mothers than when interacting with their peers, at least when they have their mothers' undivided attention.[2]

Our second observation has to do with measures that reflect approximations of syntactic sophistication. The proportion of utterances containing words that typically introduce subordinate clauses was equivalent across partners. Mean Length of Utterance was higher with peers than with mothers when calculated on the basis of all utterances, but was equivalent across partners when calculated on the basis of utterances that did not immediately follow the partner's questions. Two conclusions can be drawn here: first, the children are able to transport their syntactic skills across partners; second, the questions the mothers ask are more likely to permit single-word responses and thereby simplify the demands for syntactic sophistication relative to the demands placed by peers. This simplification may account in part for the greater amount of talk with the mothers relative to the peers.

We also considered conversational quality as indexed by use of imperatives, question asking, linkage across turns, and responsiveness to questions. Target children were more likely to use imperatives with peers than with mothers; this undoubtedly reflects status differences, but also may have functioned as a direct means of creating shared assumptions and directing the partner. The target children were equally likely to ask questions of the peer and mother partners, but differentiated between the partners by asking a higher proportion of information seeking, WH-questions of the mother. This differentiation may not rely directly in differences in the partners' behavior, but rather in the target children's perceptions of the peers' and mothers' levels of knowledge. That is, the

target children may realize that their mothers have more "unknown" information to share than do the peers.

Children maintained equivalent levels of turnabouts - that is, turns that were both contingent and projective - with each partner. Other types of turns differed as a function of partner. Children were more likely to produce contingent turns that did not include a projective when talking with the mothers, and more likely to produce projective turns that were non-contingent when talking with the peers. The children were also more likely to produce unlinked turns, that is turns that were neither contingent nor projective, when talking with the peers. The low level of usage of projectives by the children undoubtedly reflects their conversational immaturity. The differences across partners quite likely derive from differences in the partners' talk. Contingency is easily achieved by responding appropriately to questions, and mothers were more likely to ask questions than were peers. In the absence of questions there is less support for the content of the next turn, and contingency is less easily achieved. Hence unlinked turns and turns that were non-contingent but included a projective were more frequently used with the peer than with the mother. The equivalence across partners in the frequency of use of the relatively sophisticated discourse mode of turnabouts could be interpreted in one of two ways. First, it might reflect relative indifference or insensitivity to the conversational skill of the partner, just as MLU and use of words that introduce subordinate clauses was insensitive to partner. On the other hand, the equivalent rate of use of turnabouts could be interpreted as indicating that the children compensated for the less mature conversational skills of the peer partner by ending a higher proportion of their contingent turns with a projective that would provide the peer with a relatively simple means of topic continuation. Although the present data do not allow us to distinguish between these two possibilities, they do indicate that the target children's use of turnabouts was neither disrupted by the peers' conversational incompetence nor enhanced by the mother's conversational competence. Ruling out these

two possibilities contributes toward understanding the role of partner in the quality of young children's talk.

When children responded to the partner's questions, the quality of these responses in terms of the amount of information given was highly similar across partners. The single significant difference was that adequate single-word responses were much more frequent with the mothers than with the peers. This indicates that in addition to creating a conversational environment that was conceptually less demanding than than created by the peers (by asking a high proportion of questions), the mothers also created a conversational environment that was syntactically less demanding by phrasing a number of questions such that they could be adequately answered with a single word utterance. This analysis in terms of quality of responses to questions is in accord with the finding that when all utterances were considered, target children had a significantly higher MLU in interactions with their peers relative to their mothers.

The data presented here indicate that mothers are in many senses "better" conversational partners than are peers. Mothers' conversational skills enable their children to talk more and to be more contingent. However, the fact that mother-child conversations are superior to child-child conversations should not be interpreted as indicating that peer interactions and peer talk are not valuable contributors to the development of young children's conversational skills. The challenges posed by talking to peers may be a very important factor in leading children to develop conversational competence. An unresponsive peer partner is frustrating to be sure, but this same unresponsive partner may offer opportunities to practice conversational skills that are simply not frequently needed in interacting with responsive and skilled adult partners. For example, our data indicate that peers ask fewer questions, and the questions they do ask are less likely to be adequately answered with a single word. When interacting with peers therefore, the child must exercise more independence in terms of formulating her turns at the levels of both content and syntax. It is plausible that unresponsive or non-contingent peer partners may also lead

the child to adapt other strategies for maintaining joint attention and focus. As noted earlier, children use more imperatives with peers than with mothers, and these imperatives may function to establish shared assumptions and focus. There was also a borderline effect ($p < .08$) indicating that a higher proportion of tag-questions, which function to direct or maintain attention, were asked of peers relative to mothers. One feature that we have noted informally but have not yet coded is that the target children are more persistent with peers than with mothers, a discourse feature that depends in large part on non-responsiveness from the partner.

The target children used turnabouts with the same frequency with peers as with mothers, they asked questions of mothers and peers with equal frequency, they responded to questions as frequently and as accurately with the peers as with the mothers, they used subordinating conjunctions as frequently with each partner, and - depending on coding method - they showed a higher or equivalent MLU with the peer relative to the mother. The children displayed all of these conversational skills despite the fact that, compared to the mothers, the peer partners were more likely to be non-contingent, less likely to ask questions, less likely to ask questions that could be responded to with simple single-word replies, and less likely to respond to questions they were asked. The conversational immaturities of the peer partners clearly disrupt conversational flow, but neither difficulties in conversational flow nor immaturities of the peer partners appear to disrupt the children's use of their emerging conversational skills. In addition, talking with conversationally unskilled peers may enable children to practice, and thereby presumably to improve, discourse skills that are both relatively sophisticated and relatively unnecessary with attentive adult partners.

References

Bates, E. (1975). Peer relations and the acquisition of language. In M. Lewis & R. Rosenblum, (Eds.) Friendship and Peer Relations. New York: Wiley.

Bruner, J. (1983). Child's talk: Learning to use language. New York: W.W. Norton & Company.

Garvey, C. (1977). The contingent query: A dependent act in conversation. In M. Lewis & L. Rosenblum (Eds.), Interaction, conversation, and the development of language (pp. 78 - 85). New York: Wiley.

Kaye, K. & Charney, R. (1980). How mothers maintain "dialogue" with two-year olds. In O.R. Olson (Ed.) The Social Foundations of Language and Thought (pp. 211-230). New York: Norton.

Martinez, M.A. (1987). Dialogues among children and between children and their mothers. Child Development, 58, 1035-1043.

Nelson, K. (1973). Structure and Strategy in Learning to Talk, Monographs of the Society for Research in Child Development.

Snow, C. E. (1979). Conversations with children. In P. Fletcher & M. Garman (Eds.), Language acquisition: Studies in first language development (pp. 363 - 376). Cambridge: Cambridge University Press.

Tomasello, M. & Farrar, M. (1986). Joint attention and early language. Child Development, 57, 1454-1463.

MacWhinney, B., & Snow, C. (1985). The child language data exchange system. Journal of Child Language, 12, 271-295.

Footnotes

1. The following subordinating conjunctions were included: *before, after, because, so, if, but, or, since, where, when, while, which, how, that, what, who, why.* Wh-words that occurred in questions were not included. The CHILDES computer system (MacWhinney & Snow, 1985) was used to identify all occurrences of these terms; without being able to claim that all occurrences actually introduced subordinate clauses, we feel that there is no basis for assuming that the frequency with which they introduce subordinate clauses should differ across partners.

2. Mothers' behavior during the videotaped sessions forming the present database was highly child-focused, responsive, and attentive. Although it is unlikely that most mothers give their children this sort of positive and undivided attention for long periods each day, it remains the case that relative to two- and three-year-old peers mothers have robust conversational skills that can facilitate conversational exchanges with their children.

Table 1. Words: Tokens, types, the type/token ratio

	Partner	
	Mother	Peer
MEAN TOKENS	842	572
MEAN TYPES	217	160
MEAN TYPE/TOKEN RATIO	.27	.30

WORD TOKENS:

Partner $F(1, 15) = 14.77,\ p < .01$

WORD TYPES:

Partner $F(1, 15) = 21.72,\ p < .001$

TYPE/TOKEN RATIO:

Partner $F(1, 15) = 1.48,$ NS

Table 2. Amount of Talk: Utterances and Turns

	Partner	
	Mother	Peer
Mean Number of Utterances	304	189
Mean Number of Turns	212	79
Mean Utterances per Turn	1.46	2.83

Table 3: Mean Length of Utterance (MLU)

	Partner	
	Mother	Peer
Overall MLU	2.97	3.45
Spontaneous MLU	3.21	3.47

Overall MLU is based on all audible utterances.

Spontaneous MLU is based on all audible utterances not immediately following a question by the partner.

Table 4: Target Children's Question Types as Proportion of all Questions

	Question Type			
	TAG	WH-	Y/N*	I/E**
Partner				
Mother	.02	.45	.19	.34
Peer	.04	.29	.28	.38

* YES/NO QUESTIONS

** INTONATION AND ELLIPTICAL QUESTIONS

Table 5: Types of Linkages Across Turns

	Partner	
	Mother	Peer
Proportion of Turns of Each Type		
Turnabouts	.15	.17
Projective, Non- Contingent	.03	.07
Contingent, not Projective	.66	.47
Unlinked	.15	.29

Table 6: Quality of Target Children's Responses to Questions, as Proportion of Contingent Responses

	Partner	
	Mother	Peer
Content Free/ Contingent Responses	.02	.04
Less Than Information Requested/ Contingent Responses	.03	.05
Equal to Information Requested/ Contingent Responses	.72	.55
Single-word replies	.54	.32
Multi-word replies	.17	.24
Greater than Information Requested/ Contingent Responses	.23	.30